

SEPARATOR SHEET HANDLING ASSEMBLYFIELD OF THE INVENTION

The invention relates generally to an assembly for handling separator sheets, and particularly to an assembly that sorts a pile of separator sheets, which are used in stacking multiple layers of products onto pallets, into different piles depending on the characteristics of the individual separator sheets.

BACKGROUND OF THE INVENTION

Smaller products or articles of production (e.g., beverage containers) are commonly stacked on to pallets for shipping and handling. The products are arranged in horizontal tiers, or layers, on the pallet such that additional layers can be stacked on top of the lower layers. Separator sheets are placed between the layers of products to provide a uniform support surface for each layer of products. The uniform support surface makes adding and removing the top layer of products easier. As the top layers of products are unstacked from the pallet, the separator sheets between each layer are removed and set aside for reuse.

Depending on the types of products that are stacked onto the pallet, and the environment where the stacking process takes place, the separator sheets may become dirty and/or damaged. Using a dirty or damaged separator sheet in order to facilitate stacking products into layers on a pallet can result in (i) the products becoming damaged or dirty, (ii) the products being stacked on to the pallet unsafely, and (iii) damage to the palletizing machine that stacks the products on to the pallet.

SUMMARY OF THE INVENTION

The present invention provides a separator sheet handling assembly that is capable of (i) receiving a stack of separator sheets, (ii) testing the separator sheets, and (iii) sorting the separator sheets into various piles depending on whether each separator sheet is dirty, clean, damaged, or undamaged (among other characteristics).

The separator sheet handling assembly includes a lifting assembly that is adapted to receive a pallet containing a stack of separator sheets. The lifting assembly positions the stack of separator sheets into a predetermined location where a feed assembly engages a separator sheet positioned at the top of the stack of separator sheets. The feed assembly delivers the top separator sheet to a test assembly where the separator sheet is monitored

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